

PATENT COOPERATION TREATY

PCT

INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference PCT-216	FOR FURTHER ACTION see Form PCT/ISA/220 as well as, where applicable, item 5 below.	
International application No. PCT/JP2004/016380	International filing date (day/month/year) 28/10/2004	(Earliest) Priority Date (day/month/year) 12/11/2003
Applicant NISSAN MOTOR CO., LTD.		

This International Search Report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This International Search Report consists of a total of 7 sheets.

☒ It is also accompanied by a copy of each prior art document cited in this report.

1. Basis of the report

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, see Box No. I.

2. ☐ **Certain claims were found unsearchable** (See Box II).

3. ☐ **Unity of invention is lacking** (see Box III).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☐ the text is approved as submitted by the applicant.

☒ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the **drawings**,

a. the figure of the **drawings** to be published with the abstract is Figure No. 3

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☒ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/016380

A. CLASSIFICATION OF SUBJECT MATTER
 INV. H01M4/86 H01M8/02

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)
 H01M

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, COMPENDEX

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P, X	US 2004/067407 A1 (SOMPALLI BHASKAR ET AL) 8 April 2004 (2004-04-08) paragraphs [0004], [0032], [0039] - [0041], [0043] figures 3a, 3b ----- -/--	1, 2, 6-9, 13

☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

* Special categories of cited documents :

- *A* document defining the general state of the art which is not considered to be of particular relevance
- *E* earlier document but published on or after the international filing date
- *L* document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- *O* document referring to an oral disclosure, use, exhibition or other means
- *P* document published prior to the international filing date but later than the priority date claimed

T later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

X document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

Y document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.

G document member of the same patent family

Date of the actual completion of the international search

5 September 2006

Date of mailing of the international search report

12/09/2006

Name and mailing address of the ISA

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INTERNATIONAL SEARCH REPORT

International Application No

PCT/JP2004/016380

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	<p>PATENT ABSTRACTS OF JAPAN vol. 1995, no. 11, 26 December 1995 (1995-12-26) -& JP 07 201346 A (TOYOTA MOTOR CORP), 4 August 1995 (1995-08-04) cited in the application abstract paragraph [0012] paragraphs [0015], [0016]; figure 1 paragraphs [0023] - [0025]; figure 2 paragraph [0034]; figure 3 paragraphs [0036] - [0038], [0042], [0043]; figures 5,6 paragraph [0052]</p>	1-13
Y	<p>US 2002/192533 A1 (GEBHARDT ULRICH ET AL) 19 December 2002 (2002-12-19) paragraphs [0014], [0016] - [0020], [0040] - [0043], [0046] figure 2</p>	1-7
Y	<p>PATENT ABSTRACTS OF JAPAN vol. 014, no. 515 (E-1000), 13 November 1990 (1990-11-13) & JP 02 215051 A (TOSHIBA CORP), 28 August 1990 (1990-08-28) abstract</p>	1,4,5,8, 11,12
Y	<p>EP 0 273 427 A (INTERNATIONAL FUEL CELLS CORPORATION) 6 July 1988 (1988-07-06) column 1, lines 1-11 column 2, lines 9-17 column 4, lines 47-57 column 5, lines 18-27 column 7, lines 47-58 column 8, lines 1-42 figure 1 claim 1</p>	1,6,8-13
A	<p>DE 199 08 591 A1 (FORSCHUNGSZENTRUM JUELICH GMBH) 31 August 2000 (2000-08-31) column 2, lines 51-59 column 3, lines 34-62 column 5, lines 16-50; figure 1 column 6, lines 8-21; figure 3.1</p>	1-3,7
A	<p>PATENT ABSTRACTS OF JAPAN vol. 012, no. 101 (E-595), 2 April 1988 (1988-04-02) -& JP 62 232862 A (TANAKA KIKINZOKU KOGYO KK; others: 02), 13 October 1987 (1987-10-13) abstract</p>	1,6,8-13

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/JP2004/016380

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 2004067407	A1	08-04-2004	AU 2003279786 A1 CN 1723583 A DE 10393467 T5 JP 2006502548 T WO 2004034501 A2 US 2005271929 A1 US 2005058881 A1	04-05-2004 18-01-2006 01-12-2005 19-01-2006 22-04-2004 08-12-2005 17-03-2005
JP 07201346	A	04-08-1995	JP 3271410 B2	02-04-2002
US 2002192533	A1	19-12-2002	CA 2395542 A1 CN 1425207 A WO 0148854 A2 DE 19962686 A1 EP 1252681 A2 JP 2003518724 T	05-07-2001 18-06-2003 05-07-2001 26-07-2001 30-10-2002 10-06-2003
JP 02215051	A	28-08-1990	NONE	
EP 0273427	A	06-07-1988	CA 1292037 C DE 3782730 D1 JP 63232269 A US 4756981 A	12-11-1991 24-12-1992 28-09-1988 12-07-1988
DE 19908591	A1	31-08-2000	WO 0052775 A1 EP 1157435 A1	08-09-2000 28-11-2001
JP 62232862	A	13-10-1987	NONE	